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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,260	08/06/2003	Dieter Karl-Heinz Dobberstein	81699/LPK	3388

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EXAMINER

CHAU, MINH H

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/635,260

Applicant(s)

DOBBERSTEIN ET AL.

Examiner

Minh H. Chau

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/06/03 & 1/09/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. **Claims 7 and 12** are objected to because of the following informalities:

With regarding to **claim 7**, there is no antecedent basis for the language "the target rotation angle difference" (lines 6-7)

With regarding to **claim 12**, the dependency of claim 12 is improper.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claim 7** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 has been rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter because the language as recited in claim 7 is unclear which creates confusion for the reader; the Examiner is unable to determining what is a connection between the driving roller of conveyor and the register mark? What is the relationship between the sensor that detects the sheet edge and the driving roller of conveyor? And how do the rotation angle of the driving roller and the rotation angle difference being determined by the detection from the register mark and the sheet edge sensor?

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-4 and 11-12** are rejected under 35 U.S.C. 102(e) as being anticipated by ***Dreher et al.*** (US # 6,718,879).

With respect to **claim 1**, ***Dreher et al.*** teach a method to determine a register error (Col. 2, lines 15-41) comprising at least one register mark (5, 6) is printed and at least one sensor (13) records the at least one register mark (5, 6) (Col. 4, lines 12-15) characterized in that the sheet edge of the sheet (3) is recorded by the sensor (12) (Col. 3, lines 50-52) and the register error is determined from the sensor data and target data by a correction device (30) (see Fig. 3 and Cols. 3-4).

With respect to **claim 2**, see Fig. 2 of ***Dreher et al.*** that shows the register mark (5) is printed on a conveyor belt to advance a sheet (3).

With respect to **claim 3**, see Cols. 3-4 of ***Dreher et al.*** that shows the recording of the register mark (5, 6) and the sheet edge of the sheet (3) is carried out during the printing process.

With respect to **claim 4**, see Figs. 2 and 3 of *Dreher et al.* that shows a register error is recorded in the conveying direction of the sheet (3)

With respect to **claim 11**, *Dreher et al.* teach a control device for determining a register error (Col. 2, lines 15-41) comprising at least one sensor (12) for recording the front edge of a sheet (3) (Col. 3, lines 50-52) and at least one register mark (5, 6) and a device (30) for calculating a register error by sensor data of the sensor (12, 13) and from stored data (see Fig. 3 and Cols. 3-4).

With respect to **claim 12**, see Fig. 3 and Cols. 3-4 of *Dreher et al.* that teach a correction device (30) for correcting the calculated register error.

6. Claims 1, 3, 4, 6 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by *Rosli et al.* (US # 5,718,057).

With respect to **claim 1**, *Rosli et al.* teach a method to determine a register error (Col. 1, lines 41-63) comprising at least one register mark (P1, P2, P3) is printed and at least one sensor (S1, S2, S3) records the at least one register mark (P1, P2, P3) (Fig. 1 and Col. 2, lines 59-67) characterized in that the sheet edge of the sheet (5) is recorded by the sensor (D1, D2) (Fig. 3 and Col. 4) and the register error is determined from the sensor data and target data by a correction device (10) (see Figs. 4, 8 and Cols. 4-5).

With respect to **claim 3**, see Cols. 3-4 of *Rosli et al.* that shows the recording of the register mark (P1, P2, P3) and the sheet edge of the sheet (5) is carried out during the printing process.

With respect to **claim 4**, see Figs. 1-3 of *Rosli et al.* that shows a register error is recorded in the conveying direction of the sheet (5).

With respect to **claim 6**, see Figs. 1-3 and Cols. 3-4 of *Rosli et al.* that shows at least two register marks (P1, P2, P3) are applied at a distance at right angles to the conveying direction, the register error is detected in the conveying direction of the sheet (5), and an angle error of the sheet (5) is determined from the sensor data.

With respect to **claim 10**, see Col. 4, lines 50-59 of *Rosli et al.* that teach a number of register errors are statistical evaluation of the operation data or statistically averaged.

With respect to **claim 11**, *Rosli et al.* teach a control device for determining a register error (Col. 1, lines 41-63) comprising at least one sensor (D1, D2) for recording the front edge of a sheet (5) (Fig. 3 and Col. 4) and at least one register mark (P1, P2, P3) and a device (10) for calculating a register error by sensor data of the sensor (D1, D2, P1, P2, P3) and from stored data (see Cols.4-5).

With respect to **claim 12**, see Figs. 4, 8 and Cols. 4-5 of *Rosli et al.* that teach a correction device (10) for correcting the calculated register error.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Dreher et al.** as applied to claims 1-4 and 11-12 above, and in view of **Dreher et al.** (US # 6,619,209).

With respect to **claim 7**, **Dreher et al.** ('879) teach all the limitation as explained above, except for the recitation of "sensor detects the register mark ... determined from the comparison" (lines 2-7 of claim 7).

Dreher et al. ('209) teach a method for determine a register error including sensor (13) detects the register mark (5) and, in reaction to the latter, a rotation angle of a driving roller (27) of conveyor (1) is determined, the sensor (12) detects the sheet (3) edge and, in reaction to the latter, the rotation angle of the driving roller (27) of conveyor (1) and the rotation angle difference are determined, and the rotation angle difference is compared with the target rotation angle difference, and the register error is determined from the comparison (Figs. 1-3 and cols. 3-4 of **Dreher et al.** ('209)).

In view of this teaching, it would have been obvious to one of skill in the art to modify the method of **Dreher et al.** ('879) to include the method of determine the rotation angle difference of the driving roller of the conveyor belt and the register error is determined based on the comparison the rotation angle difference is compared with the target rotation angle difference as taught by **Dreher et al.** ('209) for the advantage of allowing the registration of the sheet can be carry out properly so that the print quality can be achieved.

9. **Claims 5 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rosli et al.** as applied to claims 1, 3, 4, 6 and 10-12 above

With respect to **claim 5**, **Rosli et al.** teach all the limitation as explained in the rejection above, except for the recitation of "*the sensor records at least one side edge of the sheet*"

Rosli et al. teach the method of determine a register error including a register error perpendicular to the conveying direction of sheet (5) is detected and the sensor (D1, D2) records at least one leading edge of the sheet (Fig. 3 and Col. 5).

In view of this teaching, it would have been obvious to one of skill in the art to modify the method of **Rosli et al.** to including a sensor to records at least one side edge of the sheet for the advantage of allowing the register error of the sheet can be carry out accurately so that the printing quality can be achieved.

With respect to **claim 8**, **Rosli et al.** teach all the limitation as explained in the rejection above, except for the recitation of "*the register error is determined for various types of print substrates.*"

Rosli et al. teach the method of adjusting the feeding of the sheet (5) according to the sheet thickness (different types of printing sheet) (col. 5, lines 15-23).

In view of this teaching, it would have been obvious to one of skill in the art to modify the method of **Rosli et al.** to include the register error is determined for various types of printing paper for the advantage of allowing different types of printing paper can be properly register when use in the printing device.

Allowable Subject Matter

9. **Claim 9** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

Claim 9 has been indicated for containing allowable subject matter because the prior art fails to teach the combination of a method to determine a register error including the register error for various types of print substrates is stored in an allocation table of a control device in the printing machine.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Applicant's attention is invited to the patents to Dreher et al. (US # 6,619,209), Metzler (US # 6,848,361), Romine (US # 6,997,455) and Metzler (US # 6,920,292)

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh H. Chau whose telephone number is (571) 272-2156. The examiner can normally be reached on M - TH 9:30AM - 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2854

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MHC
May 30, 2006


MINH CHAU
PRIMARY EXAMINER